Dr. Anupam Jana (Scientist/TS Gr. II)

National Institute of Pharmaceutical Education and Research, Hajipur Export Promotion Industrial Park (EPIP) Jandaha Road, NH322 Hajipur, Bihar 844102, India



Date of Joining	22th April, 2022
Mobile No	9830649577
Email	<u>anupamjana2@gmail.com; anupamjana@niperhajipur.ac.in</u>
PhD	Indian Association for the Cultivation of Science, Kolkata, 2015
M.Sc	University of Calcutta, 2010
B.Sc.	Scottish Church College, 2008
ORCID	https://orcid.org/0000-0002-0404-3513
LinkedIn ID	https://www.linkedin.com/in/dr-anupam-jana-457a32125/
Google Scholar ID	https://scholar.google.com/citations?user=v5e-tUQAAAAJ&hl=en

Personal Information

Permanent Address	Rathtala, Ramnagar School Road, Ramnagar, Hooghly, West Bengal - 712410, India
Date of Birth	10 th May, 1988
Marital Status	Married
Sex	Male
Nationality	Indian

Academic Background

- Madhyamic: 2003, Ramnagar N. B. P. C. High School, WBBSE (1st Class, 86.75%)
- Higher Scecondary: 2005, Ramnagar N. B. P. C. High School, WBCHSE (1st Class, 84.30%)
- **B. Sc.** (Chemistry (Hons.): **2008**, Scottish Church College, Department of Chemistry, University of Calcutta, Kolkata.
- **M. Sc.** (Organic Chemistry): **2010**, Department of Chemistry, Presidency College, University of Calcutta, Kolkata.

Doctoral Research

Ph. D (Organic Chemistry): 24th Dec. **2015**, Department of Chemistry, Indian Association for the Cultivation of Science, Kolkata, Kolkata, India.

Title: *Chiral Synthons from Carbohydrates towards the Synthesis of Bioactive Natural Products* **Supervisor:** Professor Subrata Ghosh, Department of Organic Chemistry, IACS-Kolkata

Postdoctoral Research Experience

Duration	Supervisor	Place	Position
June 2015 to Jan. 2018	Prof. Karol Grela	University of Warsaw Poland	Scientific Assistant
Feb. 2018 to Sept. 2020	Prof. Animesh Pramanik	University of Calcutta	Dr. D. S. Kothari Postdoctoral Fellow
Oct. 2020 to April 2022	Dr. S.P. Swain	NIPER-Kolkata	Research Associate

Research Interest

- ✤ Asymmetric Synthesis
- Total Synthesis of Natural and Pharmaceutical Products
- Green Synthesis of Biologically important molecules and exploration of their applications using in-silico modeling and in-vitro studies
- Solution of Novel Natural Product Analogues
- Organometallic Chemistry

Awards/Honours

- Sunior Research Fellow (NET-CSIR): Dec. 2009, June 2010
- ✤ Graduate Aptitude Test (GATE): 2010
- Senior Research Fellow (CSIR): 2012
- Dr. D. S. Kothari Postdoctoral Fellow (UGC): 2018

Sponsored Research Grant Received

 As a PI: Start-Up Research Grant from Science and Engineering Research Board (SERB) Govt. of India, Project title "Enantioselective total synthesis and evaluation of anti-cancer activity of Panduratins A-F and its analogues" Rs. 28,22,600 Lakhs (Oct. 2023 – Oct. 2025)

✤ As a Co-PI:

 Department of Science & Technology (DST), Rs. 3,47,19,780/- (Sept. 2023 – Aug. 2026) Project title "Efficient Process Development Strategies for Prevalent "Rare disease" Drugs"
Indian Council of Medical Research (ICMR), Rs. 47,50,086 (April. 2024 – April 2027) Project Title: Potency optimization of 4-oxoazetidine scaffolds as dual specific polyphosphate kinases inhibitors for Multi-drug resistant tuberculosis

Research Supervision

- Postgraduate: 12
- PhD: 1 (ongoing)

Publications

As Independent Researcher

1. "Protein Profiling Uncovers IGF-1R Inhibition Potential of 3-(2-Furoyl)-Indole Scaffolds in Hepatocellular Carcinoma" Efficiency Myrsing, HM Chandra Mouli, Pallaprolu Nikhil, Deepali, Abhishek Sahu, Anupam Jana,* P Ramalingam,* *Future Medicinal Chemistry*, **2025**, *17*, 513-528.



"Decoding the interaction of an imidazo-pyrimidine derivative with serum proteins: Spectroscopic, computational and structure-activity relationship analysis" Bishwayan Chakraborty, Asmit Santra, Debangana Tah, Koushik Goswami, Anupam Jana,* Agnishwar Girigoswami,* Debosreeta Bose* Biophysical Chemistry, 2025, 322, 107435.



3. In Silico Characterization of Indole-Substituted Densely Functionalized Pyrrole Against Breast Cancer: Integrating DFT, Molecular Docking, MD Simulations, and ADME Analysis, HM Chandra Mouli, Dharipally Harini, Nadeem Shaikh, Rahul Khemchandani, Shambhavi Shreya, **Anupam Jana**,* Gananadhamu Samanthula,* *Journal of Molecular Structure*, **2025**, *1328*, 141375.



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 "Method for one-pot green synthesis of pyrimidine-based fluorogenic α-amino acids for the application of protein analysis" Mohammad Zahid Hussain, Anupam Jana, Intellectual Property India Application no 202431037119 (Filled on 27th Sept. 2024)



 "Exploring Anticancer Potential of Furopyrano[3,4-b]indole via Graphene Oxide-Catalyzed Aqueous Synthesis" Mohammad Zahid Hussain, Efficiency Myrsing, H. M. Chandra Mouli, Krishnandu Dey, Salil Khajuria, Amit Kumar Paul, Abhishek Sahu, Anupam Jana* ChemistrySelect, 2024, 9 (48), e202404316.



 "Guanidine Hydrochloride (GuHCl) Catalysed Microwave-Mediated Solvent- and Metal-Free Synthesis of Pyrimido[1,2-a]benzimidazole from Aryl Aldehyde and Aryl Methyl Ketone" Rushikant Jagdale, Mohammad Zahid Hussain, Koushik Goswami, Ramalingam Peraman, Anupam Jana*, Green Chemistry, 2024, 26, 9230-9240.



7. "Unlocking therapeutic potential: exploring indole scaffolds and their structural insights as pharmacophores in designing anti-breast cancer agents", Adithya Vinod, HM Chandra Mouli, **Anupam Jana**,* Ramalingam Peraman, *Medicinal Chemistry Research*, **2024**, *33*, 1100-1132.



8. "Unleashing Naphthopyranopyrimidine's Anticancer Potential: A Deep Eutectic Solvent (DES) Study" Arindam Das,... **Anupam Jana**, Amit Kumar Paul, Md. Firoj Hossain* *New J. Chem.*, **2024**, *48*, 7566-7578.



9. "Chromatography and Catalyst-Free Synthesis of Indole-Substituted Densely Functionalized Pyrrole" Adithya Vinod, H. M. Chandra Mouli, Poulomi Pal, Efficiency Myrsing, Vamkudoth Yaswanth Naik, Harisadhan Ghosh* and **Anupam Jana***, *Journal of Organic Chemistry*, **2024**, *89*, 1407-1416.



10. "Recent advances in the palladium catalyzed synthesis of unnatural tryptophans" Koushik Goswami*, Amrita Chakraborty, Surajit Sinha* and **Anupam Jana*** *European Journal of Organic Chemistry*, **2024**, 27, e202301028.



11. "Utilizing graphene oxide (GO) catalysed cascade in the synthesis of tetracyclic pyrano [3, 4-b] indole derivatives" Efficiency Myrsing, Aditya Vinod, H. Chandra Mouli, V. Ravichandiran, and **Anupam Jana**,* *Asian Journal of Organic Chemistry*, **2023**, p.e202300126.



12. "Recent Development of Allyl-Allyl Cross-Coupling and its Application in Natural Product Synthesis" V. Ravichandiran,* **Anupam Jana*** *Org. Chem. Front.*, **2023**, *10*, 267-281.



"Recent Advances in the Green Synthesis of Poly Functionalized Pyrroles" in *Progress in Chemical and Biological Science*, Lincoln University College, Malaysia; Harisadhan Ghosh,* Anupam Jana* 2023, Chapter 6, Page 60-71. (ISBN: 978-967-2819-22-6, DOI: 10.31674/book.2023pcbs).

As Postdoctoral/doctoral Researcher

- 14. "Diaryliodonium salt as oxidant in sp3 C-H activation and synthesis of quinazolin-4(3H)-ones" Nirmal Das Adhikary, Subhra Mandal, **Anupam Jana**, Animesh Pramanik* *Results in Chemistry*, **2022**, *4*, 100270.
- "Application of organometallic catalysts for the synthesis of o-tolyl benzonitrile, a key starting material for sartans" **Anupam Jana**, V. Ravichandiran and Sharada Prasanna Swain* *New Journal of Chemistry*, **2021**, 45(38), pp. 17753–17771.
- "Graphene Oxide (GO) Catalysed MW-assisted One-Pot Synthesis of Densely Substituted Furan" Anupam Jana,* (as corresponding author), Nirmal Das Adhikary and Animesh Pramanik*, Green Chemistry, 2020, 22, 4304-4310.



17. "Ethyl lactate: A green solvent for olefin metathesis", Sebastian Planer, **Anupam Jana** (*with equal first authorship*), Karol Grela*, *ChemSusChem*, **2019**, *12*, 4655-4661 (Selected as Cover Page)



18. "Synthesis of Substituted β-Functionalised Styrenes by Microwave-Assisted Olefin Cross-Metathesis and Scalable Synthesis of Apremilast" Anupam Jana, Grzegorz Krzysztof Zieliński, Sylwia Czarnocka-Śniadała, Krzysztof Grudzień, Dominika Podwysocka, Marcin Szulc, Anna Kajetanowicz,* and Karol Grela*, ChemCatChem, 2019, 11, 5808-5813.



19. "Well-Defined Chiral Copper NHC Complex in Asymmetric Conjugated β-Borylation and One-Pot Metathesis-Asymmetric β-Borylation" **Anupam Jana,*** (*as corresponding author*), Damian Trzybiński,

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Krzysztof Woźniak, Karol Grela*, *Chemistry – A European Journal*, **2018**, *24*, 891-897.



- "Forged and Fashioned for Faithfulness—Ruthenium Olefin Metathesis Catalysts Bearing Ammonium Tags" Anupam Jana, Karol Grela*, *Chemical Communication*, 2018, 54, 122-139. (Selected as Cover Page)
- "Cross Metathesis" in "N-Heterocyclic Carbenes in Catalytic Organic Synthesis" Anupam Jana, Paweł Małecki, Karol Grela* Editor: Steven Nolan and Catherine Cazin, Science of Synthesis: Georg Thieme Verlag KG, 2017, Vol-2 Chapter 2.1.3, Pages 47-78. (ISBN: 3132414018 DOI: 10.1055/sos-SD-224-00008)
- 22. "Mild Functionalization of Tetraoxane Derivatives via Olefin Metathesis: Compatibility of Ruthenium Alkylidene Catalysts with Peroxides" **Anupam Jana** and Karol Grela* *Organic Letters* **2017**, *19*, 520-523.



23. "Synthesis of Selectively Substituted or Deuterated Indenes via Sequential Pd and Ru Catalysis" **Anupam Jana**, Kasjan Misztal, Anna Żak and Karol Grela* *Journal of Organic Chemistry*, **2017**, *82*, 4226–4234.



 "Studies towards the synthesis of bielschowskysin. Construction of the highly functionalized bicyclo-[3.2.0]heptane segment" Anupam Jana, Sujit Mondal, Subrata Ghosh* Organic & Biomolecular Chemistry 2015, 13, 1846–59.



 "Influence of ring fusion stereochemistry on the stereochemical outcome in photo-induced Diels-Alder reaction of fused bicycloheptenone derivatives" Subrata Ghosh*, Sritama Bose, Anupam Jana, A. Nijamudheen, Ayan Datta*. *Tetrahedron* 2014, *70*, 9783-90.



26. "Intramolecular Diels-Alder route to angularly oxygenated hydrindanes. Synthesis of the functionalized bicylic skeleton present in galiellalactone" Md. Firoj Hossain, Ram Naresh Yadav, Sujit Mondal, **Anupam Jana**, Subrata Ghosh*. *Tetrahedron* **2013**, *69*, 7956-63.



27. "Stereocontrolled approach to the highly functionalized bicyclo[3.2.0] heptane core of bielschowskysin through intramolecular Cu(I)-catalyzed [2+2] photocycloaddition" **Anupam Jana**, Sujit Mondal, Md. Firoj Hossain, Subrata Ghosh*. *Tetrahedron Letters* **2012**, *53*, 6830-33.



Oral/Poster Presentation at conference

- *"Towards the Synthesis of Bielschowskysin"* (**Oral Presentation**) at "Seventh Junior National Organic Symposium Trust (J-NOST) Conference", held at Indian Institute of Science Education and Research (IISER) Mohali, Punjab, India, during December 15-18, **2011**.
- "Creating Molecular Complexity through Copper (1)-Catalyzed [2+2] Photocycloaddition. Stereocontrolled Approach towards the Synthesis of Bielschowskysin" (Oral Presentation) at "Ninth Junior National Organic Symposium Trust (J-NOST) Conference", December 20-24, 2013, held at Indian Institute of Science Education and Research (IISER) Bhopal, M.P., India.
- "Creating Molecular Complexity through Copper (I)-Catalyzed [2+2] Photocycloaddition. Stereocontrolled Approach towards the Synthesis of Bielschowskysin" (**Poster Presentation**) in the symposium on "Advances in Chemistry and their Biological and Industrial Relevance (ACBIR 2014)", January 10-11, **2014**, held at National Institute of Technology (NIT) Rourkela, Odisha, India.
- *"Are Peroxides Compatible with and Can Be Modified by Olefin Metathesis? Synthetic Studies towards Anti-malarial Peroxide Derivatives"* (**Poster Presentation**) in the symposium on "Asian European Symposium on Metal Mediated Efficient Organic Synthesis" held on 4-7 September **2016**, Aula Magna, Stockholm University, Sweden.
- *"Synthesis towards the Biologically Active Molecules via Olefin Metathesis"* (Invited Talk) in Polish-French Scientific Workshop *"Advances in organic synthesis methods in the search for biologically active compounds"* held on 27th June 2017, Jagiellonian University, Krakow, Poland.
- "Utilizing Planar Chiral Copper Complex in Asymmetric Conjugated β-Borylation and One-Pot Tandem Metathesis-Asymmetric β-Borylation" (Poster Presentation) in "International Symposium on Synthesis and Catalysis" held on 4-8th September 2017, Evora University, Evora, Portugal.

References

 Professor Subrata Ghosh, FASc, FNA, Senior Professor (Ph.D supervisor) Department of Organic Chemistry Indian Association for the Cultivation of Science 2A & 2B - Raja S.C. Mullick Road, Jadavpur, Kolkata – 700 032, India Ph: +91-33-24734971, Extn -1402; E-mail: <u>ocsg@iacs.res.in</u>

Professor V. Ravichandiran

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- **Professor Karol Grela (Post-doc supervisor)** Biological and Chemical Research Centre Faculty of Chemistry, University of Warsaw Żwirki i Wigury Street 101, Warsaw-02-089, Poland Ph: +48-22-5526513; E-mail: prof.grela@gmail.com

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